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ABSTRACT

This synopsis provides highlights of a national home schooling survey of 1,516 families in the United States. The study explored five fundamental questions: (1) What are home education families' demographic and educational characteristics? (2) To what extent have home-schooling families been engaged in legal matters regarding their involvement in home education? (3) What are the demographic, educational, and post-high school characteristics of home-educated students? (4) What are the academic achievement outcomes of these students? (5) Is the academic achievement of home-educated students related to variables such as education level of parents, teacher certification status of parents, or degree of home education regulation in the student's state? Initial conclusions revealed that, on average, home education families have parents with greater formal education, more children, and higher family income. Two-parent families were the norm and they were predominantly Christian in viewpoint. The average age of the children was just over eight years--a majority of the children had never attended public or private schools. There were equal numbers of male and female students. On standardized achievement tests, the home-schooled students performed at or above the 80th percentile on national norms in reading, listening, language, math, science, social studies, basic battery, and complete battery scores. (RJM)

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ED 381 725

A Nationwide Study of Home Education

- Family Characteristics
- Legal Matters
- Student Achievements

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A Synopsis Provided by the Home School Legal Defense Association

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Initial Results From Nationwide Survey Give High Marks to Home Schooling

On November 16, 1990, the National Home Education Research Institute (NHERI) released its first report of *A Nationwide Study of Home Education: Family Characteristics, Legal Matters, and Student Achievement.*

Initial conclusions revealed that the home education families surveyed involve parents with greater formal educational attainment than average. Family income is slightly higher than the average, and two-parent families seem to be the norm. They have more children than the average United States family, and the families are predominantly Christian in viewpoint with a wide variety of religious preferences indicated.

While a number of the families had been involved in negative interactions with public school officials, relatively few had ever been engaged in court actions or full trials in connection with their home schooling. The average age of the children in the families studied was just over eight years, and it appeared that the majority of the children had never been in public or private schools. There were equivalent numbers of male and female students.

On standardized achievement tests the home-schooled students performed at or above the 80th percentile on national norms in terms of their reading, listening, language, math, science, social studies, basic battery, and complete battery scores. There were very slight relationships between the education level of parents and student achievement. The income level of the family appeared to have very little impact on the academic achievement of these students, and the findings suggested that teacher certification for the parents had no impact on the academic achievement of the students.

Students in families who were complying with home education statutes scored no better than students in "underground" situations. In fact, in some cases the "underground" students did better. No difference was found in the comparison of achievement scores for students in three groups representing various degrees of state regulation of home education.

The study, directed by Dr. Brian Ray and commissioned by the National Center for Home Education in Paeonian Springs, Virginia, explored five fundamental questions:

- What are the demographic and educational characteristics of home education families?
- To what extent have home-schooling families been engaged in legal matters regarding their involvement in home education?
- What are the demographic, educational, and post-high school characteristics of students who are home educated?
- What are the academic achievement outcomes of students who are home educated?
- Is the academic achievement of home-educated students related to variables such as education level of parents, teacher certification status of parents, and degree of home education regulation in the student's state?

The target population for the study was all home education families who are members of the Home School Legal Defense Association (HSLDA). Linear systematic sampling was used to select 2,163 families with the starting point on the list being randomly determined. Data were collected on 1,516 families and about 4,600 children. The instrument used was a survey questionnaire with four principal parts:

I. Information regarding all parents and family (e.g., demographics, teacher certification status of parents).
II. Information regarding the home education legal status of the family (e.g., contact with public school officials and with attorneys).
III. Information regarding the students (e.g., demographics, years home schooled, achievement scores, curriculum used).
IV. Opportunity to volunteer for participation in a longitudinal study.

What is the average home-schooling family like?

Descriptive Information for Families

Variable	*Mean*	*Number*
Father years education	14.99	1483
Mother years education	14.09	1499
% teaching done by father	9.95	1489
% teaching done by mother	88.32	1489
% teaching done by other person	1.71	1490
Number of children per family	3.21	1497
% income by father	96.37	1464
% income by mother	3.48	1467
Number of visits to library per month	3.09	1390
Cost ($) per child per year to home educate	488.53	1458

The average educational level of the fathers studied was 15 years of formal training (or about 3 years of college) and 14.1 years (or about 2 years of college) reported for the mothers. For comparative purposes, note that in 1988, 20.3% of those at least 25 years of age in the United States had four or more years of college. In this study of home education, 42.7% of the parents had 4 or more years of college. Further, of those at least 25 years of age in the United States in 1988, 41.8% of males and 34.9% of females had at least one year of college.

Educational Attainment of the Fathers

Years of Formal Education	*Frequency*	*Percentage*
Less than 12	45	3.0
12 (H.S. diploma)	359	24.2
13-15 (some college)	334	22.5
16 (college degree)	434	29.3
17 or more	311	21.0
Total	**1483**	**100.0**

Educational Attainment of the Mothers

Years of Formal Education	*Frequency*	*Percentage*
Less than 12	25	1.7
12 (H.S. diploma)	477	31.8
13-15 (some college)	469	31.3
16 (college degree)	412	27.5
17 or more	116	7.7
Total	**1499**	**100.0**

The average teaching schedule involves the mother giving 88% of the instruction, while the father does 10% of the teaching. Two percent of the teaching is done by some other person.

The families visit libraries about 3 times per month, and slightly more than half (57.8%) have computers in their homes.

Number of Children Per Family

Number	*Frequency*	*Percentage*
1	65	4.3
2	423	28.3
3	503	33.6
4	292	19.5
5	134	9.0
6 or more	79	5.3
Total	**1496**	**100.0**

The average family in this study consisted of a father, a mother, and 3.2 children, or a family of about 5.2. The average United States family size was 3.17 in 1988. Thus, the families studied are about 64% larger than the average 1988 American family and apparently larger than the average current family. Only 1.6% of the families were headed by single parents, and all of these were mothers.

The home education families in the study averaged a $488 per student expenditure per year. According to the National Center for Education Statistics, the average per student cost in public elementary and secondary schools was $3,987 during the 1988-89 school year. If public school costs have not changed in real dollars since 1988-89, public schools spend 817% (or over 8 times as much) of what these home education families spend on the teaching of students.

Fifty-five percent of the home education families are within the $25,000 to $49,999 range for total annual income. The median income category for them was $35,000 to $49,999. The median family income in the United States in 1987 was $30,850 in 1987 dollars. If the median income in the United States has not increased, the present study would suggest that these home education families have a slightly higher annual income than their contemporaries. It is possible that the Home School Legal Defense Association, from which the current sample was drawn, in some fashion serves those families across the country with slightly higher incomes. However, this hypothesis has not been tested. The average father earns 96% of the income for the family. About 11% of the mothers reported that they work outside of the home, and they do so for an average of 14.6 hours per week.

Annual Income of Families

Income	*Frequency*	*Percentage*
Under 10,000	21	1.4
10,000–14,999	43	2.9
15,000–19,999	82	5.5
20,000–24,999	169	11.4
25,000–34,999	379	25.6
35,000–49,999	439	29.7
50,000–74,999	234	15.8
75,000 and above	112	7.6
Total	**1479**	**100.0**

The religious preferences of the fathers and mothers were clearly Christian with 93.8% of fathers and 96.4% of mothers describing themselves as "born-again." About 40% of the fathers and 41% of the mothers considered themselves Independent Charismatic or Independent Fundamental/Evangelical. The category "Baptist" included 18.4% of the fathers and 17.6% of the mothers. Catholics represented 3.4% of the fathers and 3.2% of the mothers. There were extremely few parents in the

categories including Muslim, New Age, Jewish, and LDS (Mormon). As is consistent with other studies on home education (e.g. Ray, 1988 and Wartes, 1990a), this population of home educators was decidedly Christian or Protestant in nature.

Religious Preferences of the Fathers

Father's Religious Preference	*Frequency*	*Percentage*
Adventist	15	1.0
Amish	0	.0
Assembly of God	111	7.6
Baptist	269	18.4
Catholic	49	3.4
Episcopal	5	.3
Independent Charismatic	198	13.6
Independent Fundamental/Evangelical	378	25.9
Jewish	1	.1
LDS (Mormon)	8	.5
Lutheran	17	1.2
Mennonite	14	1.0
Methodist	13	.9
Muslim	0	.0
Nazarene	13	.9
New Age	4	.3
Pentecostal	40	2.7
Presbyterian	43	2.9
Reformed	38	2.6
Other	245	16.8
Total	**1461**	**100.0**

Religious Preferences of the Mothers

Mother's Religious Preference	*Frequency*	*Percentage*
Adventist	21	1.4
Amish	2	.1
Assembly of God	112	7.6
Baptist	260	17.6
Catholic	47	3.2
Episcopal	5	.3
Independent Charismatic	217	14.7
Independent Fundamental/Evangelical	390	26.5
Jewish	1	.1
LDS (Mormon)	9	.6
Lutheran	16	1.1
Mennonite	14	.9
Methodist	13	.9
Muslim	0	.0
Nazarene	13	.9
New Age	3	.2
Pentecostal	41	2.8
Presbyterian	40	2.7
Reformed	37	2.5
Other	233	15.8
Total	**1474**	**100.0**

What are home school students like?

Ninety-three percent (2,887/3,096) of the students described in these families were currently being home educated. Of the 3,096 children, 2,906 (93.9%) were home educated during the 1989-1990 academic year. A nearly equal number of males (50.9%) and females (49.1%) was reflected in this sample. Their average age was 8.24, or about the third grade level.

Descriptive Information About the Children

Variable	*Mean*	*Number*
Age	8.24	4620
Grade	3.25	4198
Years taught at home since 5 years old	3.02	3026
Years of public school prior to home ed.	3.36	908
Years of private school prior to home ed.	2.79	866
Years of public school after home ed.	2.31	101
Years of private school after home ed.	1.71	108
Grade through which parents intend to home educate child	10.88	2434

On average, the children had been taught at home for three years since age 5, which involves just about all of their school-age years.

Attendance at Public or Private School for Home-Schooling Children

School Participation	*Frequency*	*Percentage*
Attended public school prior to home school	908/3547	25.6
Attended private school prior to home school	866/3547	24.4
Attended public school after home school	101/3547	2.8
Attended private school after home school	108/3547	3.0

It is evident from this frequency table that a significantly larger percentage of people are moving their children into the home education option than are leaving it. No questions were asked in this study about the reasons for leaving home schooling, but some parents indicated that their original plan was to teach a child at home for a specified number of years. Thus, some of what may appear to be a drop-out factor is actually part of the parents' curriculum design.

Parents reported that in 2,434 cases (out of 4,620) they intend to home educate their children up to the eleventh grade level (10.88).

What curriculum choices are prevalent in home schooling?

Parents were asked what type of curriculum they used for their individual children, and they sometimes used more than one type for a child. The parents said that they hand picked the major curriculum components for 67.4% of the students. A satellite school curriculum was used for 5.1% of the children. A home education program provided by a local private school was used for 1.3% of the students. Finally, parents reported they used a complete curricular package (i.e., including language, social studies, mathematics, science material for the full year) for 31.4% of the students. Percentages do not total 100% because several parents selected multiple options.

How do home school students fare on standardized achievement tests?

Of the 3,034 students who were at least 5 years old, 1,471 (48.5%) took a standardized achievement test during the past 12 months. Although several other tests were used, the *California Achievement Test, Iowa Test of Basic Skills*, and *Stanford Achievement Test* accounted for 80% of all the tests taken.

Copies of the test results were attached to the returned questionnaire for 66.1% (973/1,473) of the students who took tests. The achievement scores of these home- educated students were quite high in all areas considered. Data were collected on the following: reading, listening, language, math, science, social studies, basic battery (typically reading, language, and math), and complete battery (all topics included in the overall testing of the student).

The home-educated students scored, on the average, at or above the 80th percentile in all eight of the preceding categories. The national average in conventional schools is the 50th percentile. Consistent with data in several other studies and reports, these findings show that the achievement scores are high in all grade levels (K - 12) and in all subject areas. It could be argued that these students would have done well in any educational setting, considering the family backgrounds, motivational levels of parents, and so forth from which they come.

On the other hand, a logical argument could be made that the home education environment naturally causes higher achievement because of factors such as low student-to-teacher ratio, flexibility that is possible in a small, private setting, close contact between parent and child, and the enhanced opportunity to individualize curriculum and methodology to meet the gifts and limitations of a particular child. However, no tight statistical controls to test such hypotheses were applied in this study; nor have they been applied in other studies to date.

How Many Home-Schooled Children Are There?

Patricia Lines has published articles in *Phi Delta Kappan* and other scholarly journals, calculating the number of children being home schooled in the United States. She has called correspondence course suppliers and obtained the precise number of students enrolled in their programs. She has then estimated that approximately one half of all home school students participate in such courses.

Lines' theory seems sound, but it is entirely dependent on the accuracy of her estimate of the percentage of home school students using correspondence courses.

The current survey found that 7.89% of all children living in home-schooling families (10.49% of the school-aged children) were enrolled in specified correspondence courses. The particular correspondence courses mentioned report a total enrollment of 49,740 students.

These numbers allow us to project that the number 49,740 represents 7.89% of all children living in home-schooling families or 10.49% of all children of school age (age 5 and above) being home schooled.

Based on this theory, there are 630,418 children living in home-schooling families and 474,165 children of school-age. Please recognize that these numbers are only estimates. It may also be possible that HSLDA's membership is not representative of the total population of home schoolers since some of the correspondence programs have group discount programs with HSLDA. If the sample is skewed, the number of home-schooled students may actually be somewhat larger than this estimate.

National Percentile Scores on Standardized Achievement Tests

Variable	National Percentile Mean	Number
Total Reading	84th	1068
Total Listening	85th	337
Total Language	80th	883
Total Math	81st	1073
Science	84th	390
Social Studies	83rd	380
Basic Battery	82nd	665
Complete Battery	82nd	601

What policy-making conclusions can be drawn from test performance?

Several relationships between the home-educated students' achievement scores and variables relevant to policy-making were explored in the study.

1 *Re: Educational Background of Parents*

The study found that students' scores in reading, language, math, science, and social studies were statistically related to the number of years of formal education that the mothers and fathers had completed. These correlations ranged from .13 to .19. Thus, parental education level explains or predicts **at most** less than 4% of the variance in any one of the achievement score areas. Such correlations are considered slight or negligible.

All things considered, it may be that there is a weaker relationship between parent education level and student achievement for the home educated than for those in other forms of schooling; further analysis would be needed to clarify this issue. It is possible that the home education environment is conducive to eliminating the effect of parent educational background.

2 *Re: Teacher Certification*

Only 6% of the fathers and 13.9% of the mothers surveyed had ever been certified teachers. Approximately 54% of this subset of fathers and 38.6% of this subset of mothers were current in their teacher certification. Sixty-three (73.3%) of 85 fathers who had been certified teachers had a certificate from the state in which they currently reside. Of 207 mothers who had ever been certified, 142 (68.6%) had certificates from the states in which they lived during the study.

The relationship between student achievement and the teacher certification status of the parents was significant in its absence. This study found that there was no difference in students' total reading, total math, or total language scores based on the teacher certification status of their parents (i.e., neither parent had been certified, one had been, or both had been). The findings of this study do **not** support the idea that parents need to be trained as certified teachers to assure successful academic achievement for their children.

Achievement by Certification Status of Parents

Certification Status of Parents	National Percentile Mean in Reading	National Percentile Mean in Math	National Percentile Mean in Language
Both have been certified	84th	84th	82nd
One has been certified	86th	84th	84th
Neither has been certified	84th	80th	79th
All public school students (Teacher certification required)	50th	50th	50th

3 *Re: Compliance with State Regulation*

Seven hundred sixty-two (51.1%) of 1,468 families surveyed have submitted any type of paperwork to state or local school authorities to notify them of their home school.

Legal Status of Families With Respect to Home Education State Statutes

Status	Frequency	Percentage
Underground	225	15.3
Notified district, not attempting to comply fully	72	4.9
Satisfied statutory requirements	859	58.6
In current dispute about legal status	6	.4
Other	304	20.7
Total	**1466**	**100.0**

The achievement levels of students according to the home education legal status of their families represented no significant correlation. There was no difference in total math scores between students whose families were "underground" and students whose families had satisfied the home education statutory requirements. Contrary to popular opinion, children in "underground" families actually performed better in language skills (86th percentile) than students in families who had satisfied the state home education statutes (79th percentile).

Students in "underground" families also scored better (88th percentile) in total reading than those in families

satisfying state statutes (83rd percentile). However, all home education students (regardless of family's legal status) scored well above national averages.

4 *Re: Amount of Regulation in States*

No difference was found in the achievement scores of students from three groups representing various degrees of state regulation of home education. One group was comprised of students in Iowa or Michigan families for which neither the father nor the mother had ever been a certified teacher. This group represents children of families in the states which are probably most restrictive to home education and in which the families are most likely not in compliance with the law.

The second group was comprised of students from California or Texas. Home education is basically unregulated in these two states. The third group was comprised of students from families in New York, North Dakota, Ohio, Pennsylvania, and South Carolina who have satisfied state statutory requirements regarding home education. This group represents children of families who are apparently in compliance with the law in states that regulate home education practices to a high degree.

Students in all three regulation groups scored on the average at or above the 76th percentile in the three areas examined: total reading, total math, and total language. These findings, in conjunction with others described in this section, do **not** support the idea that state regulation and compliance on the part of home education families assure successful student academic achievement.

5 *Re: Income Level of Parents*

While total reading and total language scores did not differ according to the income level of the home education family, total math scores showed some variance. Students in families with incomes of $50,000 and above scored better in math than students in families with incomes under $10,000; those in families with incomes from $50,000 – $74,999 scored better in math than those in families with incomes in the $10,000 – $14,999 bracket.

Nevertheless, students from all income groups scored at or above the 60th percentile on national norms in math. These findings do **not** support the idea that home education students in low income families are at risk of not doing well in terms of achievement.

What do home school students do after high school graduation?

Information about adults who had been home educated was gathered for only 99 subjects. This analysis did not report how long these individuals had been taught at home. Half (50.5%) of them attended either a junior college or four-year college after high school "graduation." Another 12.1% engaged in full-time employment, while the remainder pursued other activities.

Activities of Home-Educated Persons After High School

Activity	*Frequency*	*Percentile*
Junior college	17	17.2
Four-year college	33	33.3
Trade school	0	.0
Business school	0	.0
Full-time employment	12	12.1
Military	0	.0
Other	37	37.4
Total	**99**	**100.0**

For other informative publications or a comprehensive report of this study, contact the National Home Education Research Institute, Attn. Dr. Brian Ray, Western Baptist College, 5000 Deer Park Drive S.E., Salem, Oregon 97301. Or you may call (503) 581-8600. If you are ordering a copy of the report of the study, please include a $10.00 check with your request.

Student Achievement Related to Family Income

	Total Reading Score		*Total Math Score*		*Total Language Score*	
Income Group	*No.*	*Mean Percentile*	*No.*	*Mean Percentile*	*No.*	*Mean Percentile*
Under $10,000	10	85th	10	67th	8	78th
$10,000-$14,999	27	76th	28	67th	23	70th
$15,000-$19,999	57	83rd	57	77th	49	77th
$20,000-$24,999	124	84th	125	75th	112	82nd
$25,000-$34,999	249	83rd	258	79th	218	78th
$35,000-$49,999	323	84th	320	82nd	250	79th
$50,000-$74,999	171	84th	171	85th	138	81st
$75,000 and over	87	85th	84	86th	66	84th
Total	**1048**	**84th**	**1053**	**81st**	**864**	**79th**

President's Corner

We are extraordinarily pleased to bring you the first wave of results from the largest research study of home schooling ever done. Dr. Brian Ray of the National Home Education Research Institute (NHERI) performed the study at the request of our organization, which funded the study. This study is the most extensive of its kind in terms of national scope, the subjects covered, and the number of home-schooling families participating. We are extremely grateful to the 1,516 families who responded to the NHERI survey. They have helped all home schoolers obtain the most accurate and thorough data to date.

Both home schoolers and the public have appropriate curiosity about the performance of home school children. We want to know if the educational level of the parents dictates the success of home education, and we want to know more about about home-schooling families in general. This study can begin to answer these legitimate questions.

Home school children test at least 30 points higher (80th percentile) than the national averages on standardized achievement tests. This level of performance is true in every subject tested.

It appears that state regulation of home schooling does not aid student learning—in fact, language tests show children in "underground" home school families scoring higher (86th percentile) than students in families who have satisfied state law requirements (79th percentile). In math they performed the same. It is probably better simply to say that state regulation does not aid student achievement since the comparison of highly regulated states to unregulated states showed no difference in student scores.

While the achievement test scores of students where either parent (not necessarily the teaching parent) was ever certified are statistically higher than students whose parents have never been certified, the difference is negligible. The achievement scores of the wealthiest two categories of home-schooling families are almost identical to those of certified teachers.

The public policy implications of these numbers are obvious. It makes no more sense to limit home schooling to families where the parents are certified teachers than it does to limit home schooling to parents who are comparatively wealthy. The differences in achievement scores are insignificant. More importantly, the achievement scores of all categories of home school students—even those taught by poor, uncertified parents—are significantly higher than the national averages of public school students.

There is still more research to be done with this study. We hope to be able to estimate accurately the number of children being home schooled in the country. A *preliminary* interpolation of the data we have suggests that there are approximately 630,000 children in home-schooling families throughout the country. About 474,000 of these are currently of school age. This total represents more children than in the public schools of Vermont, Wyoming, Delaware, and the District of Columbia **combined**. We may be small, but we are not insignificant!

This study confirms that God's ways work.

Michael P. Farris

The Home School Legal Defense Association

Home School Legal Defense Association
Paeonian Springs, VA 22129
(703) 338-5600

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